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# TreeSap for iOS

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# TreeSap for iOS

An App Bringing People to Trees

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## Origin of the Idea

TreeSap was built to allow nature enthusiasts to identify and understand the value of trees throughout the Holland, Michigan area. Using data collected by Hope College and the City of Holland, users can identify trees via their current location, manual coordinate entry, map, and QR code. Additionally, users can add their own trees to the database and have their trees reviewed and approved by trusted curators.

## Development Process

Several tools were used throughout the project. Listed below are some of the most frequently used tools.

| | |
|---|---|
| **Xcode** | The standard IDE for iOS, watchOS, and macOS development. |
| **Pivotal Tracker** | Facilitated the agile development process through task management. |
| **Sourcetree** | Allowed for easy version control and branch visualization. |
| **i-Tree** | Provided the data for nearly all tree benefit calculations. |
| **Google Firebase** | Allowed for the storage and retrieval of user-generated tree data. |

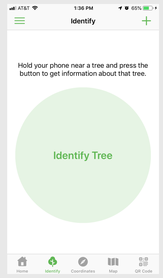
## Acknowledgements

Hope College • Hope College Computer Science Department
Hope College Biology Department • City of Holland
Dr. Kathy Winnett-Murray • Dr. Greg Murray
Dr. Mike Jipping • i-Tree

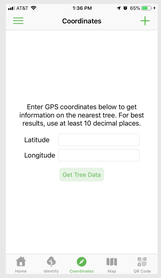
## Tree Identification

Users can identify trees via four different methods: current location, manual coordinate entry, map, and QR code.

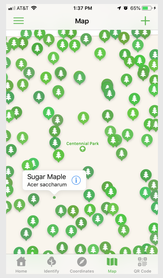
**Current Location**




**Manual Coordinates**




**Map**

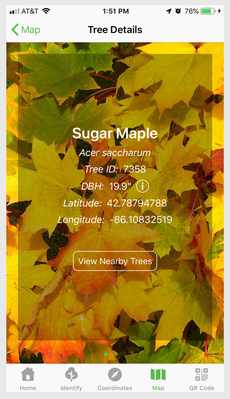



**QR Code**

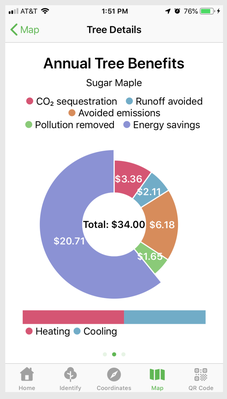

## Tree Details

When the app identifies a tree, users can view the details of the tree in three different ways: a general overview, benefit pie chart, and benefit cereal box display.

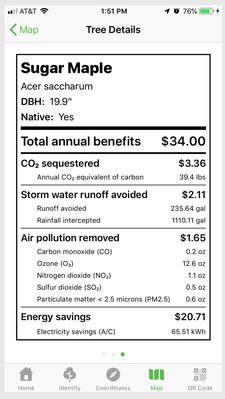
**Overview**




**Pie Chart**

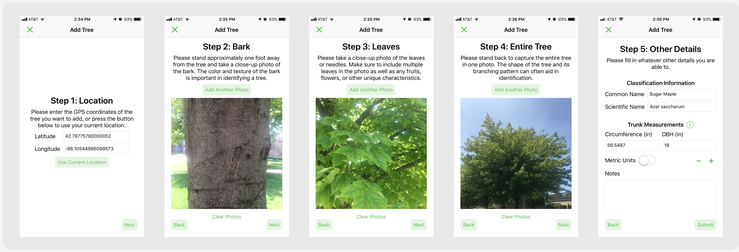



**Cereal Box**




## Adding Trees

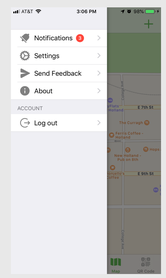
Users who create a TreeSap account are able to add their own trees to the database. The app guides users through the submission process, allowing them to add images, notes, and other information. Submitted trees are then reviewed by trusted curators to ensure that the data is accurate.



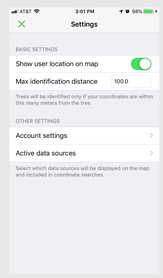

## Other Features

Users can adjust various app preferences, view notifications from curators, and adjust their account settings. Additionally, curators can appoint other curators via email.

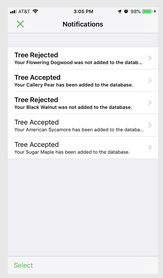
**Menu**



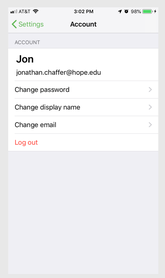

**Settings**




**Notifications**




**Account**




## Future Work

Future versions of TreeSap could include the ability to add notes and images to existing trees, as well as the ability for curators to edit pending trees before accepting or rejecting them.